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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,027	01/28/2002	Robert A. Blakley	87335.3500	2224

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EXAMINER

SORKIN, DAVID L

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/056,027	Applicant(s) BLAKLEY ET AL.	
	Examiner David L. Sorkin	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,11-13,19-21 and 23 is/are rejected.
- 7) ☒ Claim(s) 3,4,6-10,14-18 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Drawings

1. The drawings filed 13 March 2002 are objected to for the following reasons:
2. The drawings fail to comply with 37 CFR 1.84(p)(4) because reference character "38" has been used to designate both the biasing means and a bolt. See Figs. 1 and 2.
3. In Figs. 1 and 2 reference character "24" must be underlined to comply with 37 CFR 1.84(q).
4. To comply with 37 CFR 1.84(q), in Fig. 6 reference character "200" must be provided with a lead line instead of being underlined.
5. In Fig. 1, O-rings 43 and 44 must be located in movable element 26 rather than in collar 20 and protrusion 18, to be consistent with the originally filed drawings, paragraph [0038] of the specification, and paragraphs [0018] and [0019] which state that Fig. 2 is the same structure as Fig. 1, but in a shutoff position.
6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

7. The specification uses reference character "38" to refer to both the biasing means and a bolt. Different characters should be used for these parts. See for example, line 6 of paragraph [29], line 4 of paragraph [34] and line 15 of paragraph [41].
8. In line 8 of paragraph [68], "whils" should read - - while - -, or - - whiles - -.

Suggestion

9. While one of ordinary skill in the art would understand that in the last line of claim 24, "the actuating means" refers to the second actuating means, it is suggested that the word - - second - - be inserted to make the phrase more clear.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It appears that claim 13 should depend from claim 12 rather than claim 8. In claim 13, there is lack of antecedent basis for "the attaching means".

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 2, 5, 11, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Stark (US 5,772,214). Note: in independent claim 1 is considered that the vessel, recited in the phrase "for use with a vessel" is not positively recited as part of the claimed structure, because it is only recited in a preamble statement of intended use. However, it is considered that the "shaft" is positively recited as part of the claimed structure because structural relationships of parts to shaft are recited, such as "a collar

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disposed on the shaft". Regarding claim 1, Stark ('214) discloses an apparatus for use with a vessel (13) having a rotatable shaft (12) therethrough, the apparatus comprising a collar (28) disposed on the shaft wherein the collar rotates with the shaft (see Figs. 2 and 3; col. 2, line 59 "disc 28 affixed to the rotor shaft"); a housing (that which houses collar 28, "17" in Fig. 1) having a protrusion (the portion of the housing which contacts 26 on the radially outer surface of 26 as best seen in Fig. 3); a first hydraulic nut (as seen in Figs. 2 and 3, the wider portion of "26" which contacts the hydraulic fluid in cavity 25 and which also contacts portions of the housing) mounted on the housing; and a first movable element (the narrower portion of "26" which contacts 28) connected to the first hydraulic nut so that that the first moveable element is axially moveable (Figs. 2 and 3 depict two different axial positions), wherein the first movable element contacts both the collar and the inward protrusion when the first moveable element is in the shutoff position (the position of Fig. 3). Regarding claim 2 the first movable element contacts the collar and the inward protrusion to form a seal when the first movable element is in the shutoff position (see Fig. 3; disclosure of pressurized fluid in cavity 25 applies force to collar 28 is considered additional evidence the a seal is formed, see col. 2, lines 54-61; a seal at 31 is also formed). Regarding claim 5, the housing ("17" in Fig. 1) comprises a lower portion (a right portion of 17 in Fig. 1), a middle portion (a middle portion of 17 in Fig. 1); and an upper portion (the left portion of 17 in Fig. 1 which bolts to the vessel 13), wherein the lower portion is affixed to the middle portion, the middle portion is affixed to the upper portion and the upper portion is affixed to the vessel (see Fig. 1). Claim 11 requires "the collar is integral with the shaft". Stark ('214) discloses

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"disc 28 affixed to the rotor shaft" (col. 2, line 59). It is considered that disclosure of the collar being "affixed" to the shaft is sufficient to anticipate recitation of being "integral". See *In re Hotte* 177 USPQ 326 (CCPA 1973) and *Henderson v. Grable* 144 USPQ 91 (CCPA 1964) regarding proper interpretation of the word "integral". Regarding claim 19, Stark ('214) discloses an apparatus comprising a vessel (13), a motor (16); a rotatable shaft (12) extending from the motor and into the mixing vessel; a sealing element (32) for providing a primary sealing engagement between the vessel and the rotatable shaft; and a seal shutoff apparatus having an operating position (as depicted in Fig. 2) and a shutoff position (depicted in Fig. 3), wherein the seal shutoff apparatus provides a secondary seal between the vessel and the rotatable shaft when in the shutoff position (see abstract), the seal shutoff apparatus comprising a housing (that which holds collar 28, see Figs. 2 and 3) having an inward protrusion (the portion of the housing which contacts 26 on the radially outer surface of 26 as best seen in Fig. 3), the housing being attached to the vessel (see Fig. 1); at least one hydraulic nut (as seen in Figs. 2 and 3, the wider portion of "26" which contacts the hydraulic fluid in cavity 25 and which also contacts portions of the housing) mounted to the housing; at least one moveable element (the narrower portion of "26" which contacts 28) attached to the at least one hydraulic nut ; and a collar (28) disposed on the shaft which rotates with the shaft protruding into the housing (see Figs. 2 and 3). While the reference does not use the term "mixing", it is considered that the apparatus of Stark ('214) is capable of receiving material to be mixed and mixing and processing materials because it is disclosed to have a rotatable impeller within the vessel and is disclosed to receive

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refrigerant (see col. 2, lines 31-38). Regarding claim 21, Stark ('214) discloses a method for providing a sealing engagement between a vessel (13) and a rotatable shaft (12) comprising providing a seal shutoff apparatus having a collar (28) disposed on the shaft (see Figs. 2 and 3; col. 2, line 59 "disc 28 affixed to the rotor shaft"), a housing a housing (that which houses collar 28) having a protrusion (the portion of the housing which contacts 26 on the radially outer surface of 26 as best seen in Fig. 3), a first hydraulic nut (as seen in Figs. 2 and 3, the wider portion of "26" which contacts the hydraulic fluid in cavity 25 and which also contacts portions of the housing) mounted on the housing; and a first movable element (the narrower portion of "26" which contacts 28) connected to the first hydraulic nut; and actuating the first hydraulic nut (see col. 3 line 62 to col. 4 line 1), thereby displacing the first movable element to contact both the collar and the inward protrusion (see Fig. 3) to form a seal (at 31).

14. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Larkins (US 5,303,933). Note: in independent claim 23 it is considered that the vessel, recited in the phrase "for providing a reversible sealing engagement between a vessel" is not positively recited as part of the claimed structure, because it is only recited in a preamble statement of intended use. However, it is considered that the "shaft" is positively recited as part of the claimed structure because structural relationships of parts to shaft are recited, such as "a first sealing means disposed on the shaft". Larkins ('933) discloses a seal shutoff apparatus for providing reversible sealing engagement between a vessel and a rotatable shaft (30) (see abstract), the apparatus comprising a first stationary sealing means (14,18) disposed on the shaft (30), wherein the first

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stationary sealing means rotates with the shaft (see col. 2, lines 31-34); a second stationary sealing means (23) disposed within a housing (see Figs. 1 and 2); and a first movable sealing means (12,13,17) connected to a first actuation means (22) for axially displacing the first movable sealing means to sealingly contact both the first stationary sealing means and the second stationary sealing means to form a seal (as seen in Fig. 3, 13 contacts 14 and 12/13 contacts 23), wherein the actuating means (22) is mounted in the housing (see Figs. 2 and 3).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark (US 5,772,214) in view of Larkins (US 5,303,933). The apparatus of Stark ('214) was

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discussed above regarding claim 1, from which claim 12 depends. While Stark ('214) discloses that the collar is "affixed" to the shaft (see col. 2 line 59), the exact manner in which it is affixed is not disclosed. Larkins ('933) teaches that set screws are a preferable means by which to attach a collar to a shaft (see col. 2., lines 47-52). It is considered that it would have been obvious to have attached the collar of Stark ('214) using the attachment means (set screws) taught by Larkins ('933) because Larkins ('933) states that set screws are a "preferable" means by which to attach a collar to a shaft (see col. 2, lines 47-52). Note: while claim 13 (which explicitly recites "set screws") depends from claim 8 it appears that it should depend from claim 12 to provide proper antecedent basis for "the attaching means", as discussed above regarding section 112. If claim 13 did depend from claim 12, rather than claim 8, it would be rejected on the same grounds as claim 12.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stark ('933) in view of Sexton et al. (US 5,213,468). The apparatus of Stark ('468) was discussed above with regard to claim 19, from which claim 20 depends. Claim 20 further requires a "floating flushing bushing". Stark ('468) fails to disclose that the apparatus further comprises a "floating flushing bushing". Sexton ('468) further teaches a floating flushing bushing (see col. 1, lines 7-12; col. 2 line 65 to col. 3 line 6; col. 6 lines 50-55). It is considered that it would have been obvious to one of ordinary skill in the art to have provided the apparatus of Stark ('468) with a floating flushing bushing to prevent exposure of bearings to potentially damaging materials being processed as taught by Sexton ('468) (see col. 1 lines 5-45, col. 2 line 65 to col. 3 line 6; col. 6 lines

50-55). It is also noted that the instant specification refers the floating flushing bushing as a "standard" part (see paragraphs [51] and [52]).

Allowable Subject Matter

19. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art, Stark ('214), was discussed above regarding claim 2, from which claim 3 depends. While Stark ('214) discloses all the limitations of claim 2, the further limitation of claim 3 "further comprising a plurality of sealing elements for sealingly engaging the first moveable element to the collar and inward protrusion when the first moveable element is in the shutoff position" is not disclosed by Stark ('214) nor fairly taught by the prior art. Claim 4 depends from claim 3 and would therefore be allowable for the same reason.

20. Claims 6-10 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art, Stark ('214), was discussed above regarding claim 1, from which claim 6 depends. While Stark ('214) discloses all the limitations of claim 1, the further limitations of claim 6 which requires a second hydraulic nut and second movable element, where the first and second movable elements axially move to contact first and second sides of the collar respectively is not disclosed by Stark ('214) nor fairly taught by the prior art. Claims 7-10 and 14-18 depend from claim 6 and would be allowable for the same reason.

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21. Claim 13 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims (i.e. claims 1, 6, 7 and 8).

Claim 13 would be allowable for the same reason as claim 6, discussed above, because claim 13 ultimately depends from claim 6.

22. Claim 22 is allowed. The closest prior art is Stark ('214); however, Stark ('214) fails to disclose actuating first and second hydraulic nuts to displace first and second movable elements to contact first and second sides of both a collar and a protrusion, as required by the claim.

23. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art is Larkins (5,303,933); the closest prior art, Larkins ('933), was discussed above regarding claim 23, from which claim 24 depends. While Larkins ('933) discloses all the limitations of claim 23, the further limitations of claim 24 which require second movable sealing means and second actuating means for axially displacing the second movable means to sealingly contact both the first stationary sealing means and the second stationary sealing means to form a seal are not disclosed by Larkins ('933) nor fairly taught by the prior art.

Conclusion

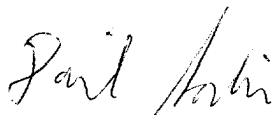
24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in cursive script, appearing to read "David Sorkin".

David Sorkin